

The Healing Power of Sound

By Kate Kunkel

“The universe is in a continuous state of vibratory motion. Rhythmic patterns appear throughout the universe, from the very small to the very large. Atoms are patterns of probability waves, molecules are vibrating structures, and living organisms manifest multiple, interdependent patterns of fluctuations. “Plants, animals, and human beings undergo cycles of activity and rest and all their physiologic functions oscillate in rhythms of various periodicities.”

Fritjof Capra in “The Tao of Physics”

It is amazing how our lives are affected by sound. Just as all the other great scientific principles such as math, gravity, electricity and light are now taken for granted, so is sound. Although many have contributed to the development of our knowledge about sound, one of the first pioneers to greatly expand our knowledge was Pythagoras. Although Pythagoras is primarily known for his contributions to mathematics and geometric theorems, his major contribution to music theory was the discovery of mathematical relationships, the ratios between the harmonic intervals of the sounds of the planets orbits.

Candice Pert Ph.D., a medical researcher, who discovered the “endorphin receptor”, stated in her book that sound opens the cell receptors faster than anything else does. The book she wrote is entitled “Everything You Need to Feel Good”.

Our daily lives are filled with frequencies; frequencies of light, sound and electromagnetic waves. Sound is the first human experience we perceive while in the womb; the first human sense we develop. Every sound frequency has an effect on our body; it can be beneficial to us or it can harm us.

As far as technology and sound, almost everyone can access their simple components and begin the first step in altering the vibratory signature of our cells which is also known as “The Journey of Self Healing”. Sound researchers and composers, from the beginning of time, have

had musical compositions and chants that heal. Becoming aware of the impact we have on the symphony of life is the first step of conscious creation.

Research into binaural beats and brain entrainment has been pursued for over thirty years with amazing success in the areas of stress relief, pain management and peak performance both mentally and physically. In Germany, doctors prescribe CD's for common ailments and are promptly reimbursed by their insurance carriers; a fact dreaded by the pharmaceutical companies. Most research funds are allocated directly to pharmaceuticals and bypass the research on the root of core molecular change that occurs with the use of sound.

NASA has long been researching the uses of sound for civilian, military and space applications. Radar became functional in 1934 using the principles of sound reflection off objects. NASA uses sound generators and vibroacoustics delivery systems to keep our astronauts healthy in space. It is one of the few research facilities where funding into sound research is abundant.

Changing the molecular structure of the water we drink and the liquid in our bodies is how sound can have the immediate results on the body's cells. The effects of sound on water is another field of great potential considering the majority of all living entities, human, plant and animals, are mostly water. Even the beloved planet we live on is largely composed of and operates on water. Many sound programs are available free on the internet as well as the effect of each frequency on water and biology. The list of companies that make healing music and tuning forks are endless and easily accessible to anyone with internet access.

Princeton University graduate Joel Sternheiner, discovered the mechanism that calculates how plants respond to the stimulation of sound waves. Sound affects the amino acids and protein molecules in all living things. Produce grows more than twice as fast without any viruses when played a simple sound frequency for less than one minute. The implications of this discovery on the quality of our food supply is hard to imagine; no more chemicals and the elimination of famine?

Sound Waves

Sounds are waves, which can be measured as frequency. Frequency is measured in Hertz "Hz" units; it's the number of waves that pass by per second. An "A" note on a violin string, for example, vibrates at about 440 Hz (440 vibrations per second).

The ancients understood that sound can help us alter our consciousness and unleash mind powers that are normally not accessible to us in ordinary consciousness. Anthropologists who have studied ancient shamanic rituals have found that shamans, for example, have long used the rhythmic sounds of drum beats to induce altered states of consciousness. Scientists have found that specific drum beat frequencies can produce theta brain waves, which match meditative states.

We can enhance our creativity, intuitive insights, memory, intelligence and health by altering our brain waves.

The four recognized brain wave ranges:

Beta (14-30 Hz) is present in normal waking consciousness;

Alpha (7-14 Hz) in states of relaxation;

Theta (4-7 Hz) in meditative states; and the slowest,

Delta (0.5-4 Hz) in deep sleep and profound meditative states.

The most recently researched brain frequency is Gamma, which is the fastest, about 30.0 Hz and higher. You can use sound to positively alter your brain wave frequencies and produce specific desired results.

The theta mind state, for example, is associated with many extraordinary and even super human abilities. Shamans and other people who live close to the earth, such as the Aborigines of Australia, have long been known for possessing super human powers. According to stories passed on by shamans of the Southwest, Sitting Bull and Geronimo used mind powers to time travel, walk without leaving foot-prints, communicate with plants and discover miraculous cures.

Studies have demonstrated that when people listen to sounds that are in the theta range (4.0-7.0 Hz), they enter deep meditative states and tend to have greater visualizations, inspiration and reprogramming abilities than when they are in the ordinary waking state of beta. While meditative states, such as theta, are enormously valuable, the higher frequency states, such as beta/gamma, also provide their own benefits.

If you want to enhance your mind abilities while you are working on your computer or doing analytical work that requires high-alert states, you can benefit from listening to beta/gamma frequencies. (Gamma is at the low end of the frequencies used for vibroacoustic therapy).

These higher frequency sound waves are associated with bursts of insights, high-level information processing and certain cognitive activities, such as analysis and math. We all can learn how to use the power of sound to change our brain waves and enhance our lives in specific ways.

There are many ways to alter your brain waves. You can, for example, tune into the natural sounds of nature during a vision quest or listen to brain entrainment audios. It is easy and practical for anyone to positively influence their brain waves in extraordinary ways once we expand our awareness of the options available to us.

Comparing Sound Therapy with Music Therapy

Music therapy is the relationship between therapist and patient.

Sound therapy is about the application of sound/ low level frequencies, directly to the patient. That is one of the reasons sound therapy can be effective even with elderly clients who have advanced Alzheimers Disease or children with ADHD. The physical response is independent of any emotion/psychological stimulus.

Frequencies

Ranges:

Ultrasound:	10 Gigahertz – rapidly absorbed in fluid media
Radiowaves:	12 KHz to 100 MegaHz
Average Hearing range:	20 to 20,000 hz
Normal speech:	500 to 2,000 hz
Harp:	32 to 3136 Hz
Chakras:	100 to 2000 hz – subharmonics of original frequencies?
VAT:	30 to 120 Hz (primarily 30 to 100 Hz)
Infrasound:	less than 20 Hz
Shumann resonating frequency:	7.83 Hz – earth's electrical field

One Hertz is exactly equal to one cycle per second, but one hertz is a very small unit, so prefixes are used that denote the order of magnitude of the waveform, such as kHz, MHz, and even GHz.

Prefix	Definition	Written as	Time Period
Kilo	Thousand	kHz	1mS
Mega	Million	MHz	1uS
Giga	Billion	GHz	1nS
Tera	Trillion	THz	1pS

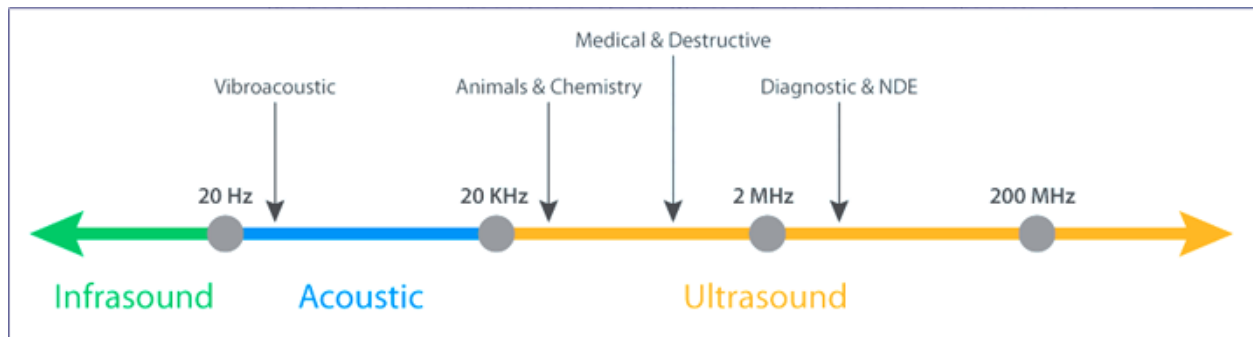
The human ear can hear approximately 20,000 audible frequencies. The range varies for each individual depending of their health and age. Frequencies make hearing possible for both humans and animals. For example, dolphins can hear frequencies a high as 180,000 Hz in their communication system and dogs can hear frequencies above human hearing. The piano has its lowest note as 24 Hz and its highest note as 4,186 Hz. The sound frequencies of the spheres (the earth, sun and other planets in our solar system) as they rotate in our planetary system are so low that they have to be raised 20 to 30 octaves to be heard by the human ear.

Scientists at NASA have installed magnetic-field generators into the space shuttles. These devices generate a pulsing 7.8 Hz background signal to maintain optimum health for the shuttle's astronauts during space maneuvers. "Ultra Sound Therapy" is used and is generally accepted in hospitals, by doctors and physical therapists for pain management on various muscles and aching backs.

It must be remembered that, while sound can be very healing, (depending on the frequencies) it also can do damage. Remember that vibrations caused by the wind were responsible for the collapse of the Tacoma Narrows Bridge in 1940. High frequencies can be used to destroy things as witnessed in the Memorex television commercial in which Ella Fitzgerald shattered a glass with her voice by singing a high note.

The use of sound in healing has become a proven tool because of its unique properties. Sound travels four times faster through water than it travels through air. The body is 60 to 80% water and is a perfect receptor for sound. So when you apply the frequencies directly on the body through the vibroacoustic device, you introduce a sound wave that travels through the meridians system, the superhighway of your body's energy system, to exactly where it is needed most.

Because sound has the ability to by-pass our emotions, it can be used independently of music for healing.



Of course sound in its most sublime form is music, and in that form, it has been used for healing throughout time. Experiments have shown that plants exposed to Western or Indian classical music thrive and cows who hear soothing music produce more milk. But just as pure frequencies can be beneficial or harmful, so too can music. Experiments have shown that rats exposed to hard heavy metal rock music become aggressive, and plants exposed to it often wither and die.

Today's Sound Medicine

- Ultrasound – diagnostic
- Ultrasound – Therapeutic, pain, tumors
- Lithotripsy – kidney and gall stones
- Sonic scaling – dentistry

Cymatics (excerpt from “Cymatherapy” by Chris Gibbs)

Cymatherapy is a form of targeted vibroacoustic therapy that integrates the principles of modern physics with traditional and modern forms of medicine. The premise is that, when injury and disease occur within the body, affected structures such as cells, tissues and organs can become damaged and lose their structural integrity. When exposed to sound and its structuring interactions, there is a potential to gently encourage the reorganisation of these damaged structures, leading to a quicker healing process and recovery. Resonant sound frequencies may also have the therapeutic potential to stimulate nerves in a way that signals the brain to initiate processes of repair, growth and regeneration.

Cymatherapy uses specialised sound and magnetic energy frequencies designed to interact with the body's many energy fields to encourage therapeutic structuring and regulation. By using this

approach, Cymatherapy has the potential to assist in overcoming the disturbed frequencies that can occur during times of stress, injury and illness. Therefore, the therapeutic application of Cymatherapy to the body is somewhat like the process of retuning a piano.

Cymatherapy is currently being applied as a complementary therapy for supporting many medical and non-medical illnesses. Due to the subtle but penetrating effects of sound, Cymatherapy can be applied deeply to generate resonance for supporting physical, mental and energetic functioning. The frequencies being used also appear to enter the body through the subtle energetic systems often associated and supported with traditional forms of Eastern medicine, such as acupuncture meridians and the chakras.

Cymatherapy can also be applied as an individual therapy or combined with other forms of complementary therapy, which can assist by enhancing and sustaining therapeutic outcomes.

Soundscapes

Some of the earliest scientific indications that sound has an important structuring effect upon substance were discovered through the development of what are known as soundscapes.

Soundscapes are visual patterns created in substances when they are exposed to the vibration of specific sound frequencies. Some of the earliest examples of soundscapes, known as 'Chladni figures', were created by musician and physicist Ernst Chladni around 1780(4). He discovered that vivid symmetrical patterns and shapes could be created in sand, when placing it upon a square glass or metal plate and running a violin bow across the plate's outer edge. The vibration of the metal plate resulted in the formation of a subsequent sand pattern. By adjusting the bow to play different musical notes or sound frequencies, Chladni found he could create an entirely different pattern or shape within the sand that was on the plate. What is important about these early soundscapes is that the pattern created by each specific sound vibration had an exact geometrical symmetry and therefore could be expressed as a mathematical formula. In other words, certain sound frequency vibrations were now known to influence substance in a structurally specific and predictable way.



One of the most inspiring and influential soundscape researchers of all time was Swiss medical doctor and philosopher of science Hans Jenny (1904-1972) (2). Dr Jenny's work was greatly inspired by the earlier work of Chladni, while providing a vast array of more sophisticated and updated illustrations. Instead of using a glass or metal plate, Dr Jenny used surfaces made of various materials including rubber, stretched paper and steel.

Crystal oscillators were also adhered to the underside of these surface membranes. Electrical stimulation was then applied to the crystal oscillators to generate audible sound vibrations at various frequencies. Each of these frequencies vibrated the membrane and whatever substance was placed upon it. A wide variety of individual and combined substances were tested, such as salts, molten plastics, metals, oils and water.

Specific audible sound frequency vibrations produced symmetrical patterns within the materials that were exposed to them. However, Jenny's experiments went much further than Chladni's to create more complex patterns in substances and using a wider variety of sound frequencies. Another important finding was that regulatory movement as well as structuring of substances could be sustained when exposed to certain sound frequency vibrations.

However, one of the most important observations was that many of the substances used in Jenny's experiments were the same or similar to those contained within the body, including its composite water, salts and oils. Therefore, it is not hard to propose that audible sound vibrations can have a structuring and regulating effect upon the movement of these substances when sound is transmitted through the body. It is also important to realise that sound can penetrate through most substances and even faster through dense structures and water than through air. This is important because the body is predominantly made up of around sixty percent water and a large amount of dense tissue, making it a good medium for interacting with sound and its vibrational effects.

Dr. Sir Peter Guy Manning, M.D. of England, used the research of Hans Jenny to create Balancing Codes – sound made visible at an almost inaudible – 700 plus codes, each have 5 frequencies, to regenerate cells by creating harmonics and sub-harmonics in the body.

Information there: <http://www.spiritofmaat.com/archive/mar1/cymatics.htm>

For an interesting article by Jeff Volk on this topic, go to <http://cymaticsource.com/pdf/QuestersArticle.pdf>